## INOP COMPONENTS

10098

#### INOPERATIVE COMPONENTS OR VISUAL AIDS TABLE

Landing minimums published on instrument approach procedure charts are based upon full operation of all components and visual aids associated with the particular instrument approach chart being used. Higher minimums are required with inoperative components or visual aids as indicated below. If more than one component is inoperative, each minimum is raised to the highest minimum required by any single component that is inoperative. ILS glide slope inoperative minimums are published on the instrument approach charts as localizer minimums. This table may be amended by notes on the approach chart. Such notes apply only to the particular approach category(ies) as stated. See legend page for description of components indicated below.

#### (1) ILS, MLS, PAR and RNAV (LPV line of minima)

Inoperative	Approach	ncrease
Component or Aid	Category	Visibility
ALSF 1 & 2, MALSR,	ABCD	1/4 mile
& SSALR		

#### (2) ILS with visibility minimum of 1,800 RVR

ALSF 1 & 2, MALSR,	ABCD	To 4000 RVR
& SSALR TDZL RCLS	ABCD	To 2400 RVR*
R∨R	ABCD	To ½ mile

<sup>\*1800</sup> RVR authorized with the use of FD or AP or HUD to DA.

#### (3) VOR, VOR/DME, TACAN, LOC, LOC/DME, LDA, LDA/DME, SDF, SDF/DME, GPS, ASR and RNAV (LNAV/VNAV and LNAV line of minima)

Inoperative	Approach	ncrease
Visual Aid	Category	Visibility
ALSF 1 & 2, MALSR, & SSALR	ABCD	½ mile
SSALS,MALS, &	ABC	⅓ mile
ODALS		

#### (4) NDB

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ALSF 1 & 2, MALSR,	С	½ mile
& SSALR	ABD	⅓ mile
MALS, SSALS, ODALS	ABC	1⁄4 mile

#### CORRECTIONS, COMMENTS AND/OR PROCUREMENT

FOR CHARTING ERRORS, OR FOR CHANGES, ADDITIONS, RECOMMENDATIONS ON PROCEDURAL ASPECTS CONTACT:

FAA, National Aeronautical Navigation Services SSMC-4, Sta. #4259 1305 East West Highway Silver Spring, MD 20910-3281 Telephone 1-800-626-3677

Email 9-AMC-Aerochart@faa.gov

FOR PROCUREMENT CONTACT:

or any authorized chart agent

FAA, National Aeronautical Navigation Services REDIS/Distribution Team 10201 Good Luck Road Glenn Dale, MD 20769-9700 Online at http://aeronav.faa.gov Email 9-AMC-Chartsales@faa.gov Telephone 1-800-638-8972 Fax 301-436-6829

Frequently asked questions (FAQ) are answered on our website at <a href="http://aeronav.faa.gov">http://aeronav.faa.gov</a>. See the FAQs prior to contact via toll free number or email.

Request for the creation or revisions to Airport Diagrams should be in accordance with FAA Order 7910.4.

## INOP COMPONENTS

## TERMS/LANDING MINIMA DATA

IFR LANDING MINIMA

The United States Standard for Terminal Instrument Procedures (TERPS) is the approved criteria for formulating instrument approach procedures. Landing minima are established for six aircraft approach categories (ABCDE and COPTER). In the absence of COPTER MINIMA, helicopters may use the CAT A minimums of other procedures. The standard format for RNAV minima and landing minima portrayal follows:

## RNAV (GPS) MINIMA

CATEGORY	Α	В	С	D	
LPV DA		1540/24 258 (300-1/2)			
LNAV/VNAV DA	160	1600/40 318 (400-¾)			
LNAV MDA	1840/24	558 (600-1/2)	1840/50 558 (600-1)	1840/60 558 (600-1 ¼)	
CIRCLING	1840-1	545 (600-1)	1840-1½ 545 (600-1½)	1860-2 565 (600-2)	

NOTE: The 👿 symbol indicates outages of the WAAS vertical guidance may occur daily at this location due to initial system limitations. WAAS NOTAMS for vertical outages are not provided for this approach. Use LNAV minima for flight planning at these locations, whether as a destination or alternate. For flight operations at these locations, when the WAAS avionics indicate that LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach using the displayed level of service. Should an outage occur during the procedure, reversion to LNAV minima may be required. As the WAAS coverage is expanded, the W will be removed.

RNAV minimums are dependent on navigation equipment capability, as stated in the applicable AFM, AFMS, or other FAA approved document, and as outlined below.

#### GLS (GLobal Navigation Satellite System (GNSS) Landing System)

The GLS (NA) minima line will be removed from existing RNAV (GPS) approach charts when LPV minima is published.

## LPV (An Approach Procedure with Vertical Guidance (APV) based on WAAS lateral and vertical guidance)

Must have WAAS avionics approved for LPV approach.

#### LNAV/VNAV (Lateral navigation/Vertical navigation)

Must have either:

- a.) WAAS avionics approved for LNAV/VNAV approach, or
- b.) A certified Baro-VNAV system with an IFR approach approved GPS, or
- c.) A certified Baro-VNAV system with an IFR approach approved WAAS, or
- d.) An approach certified RNP-0.3 system with barometric vertical guidance (Baro-VNAV).
- Other RNAV systems require special approval.

#### NOTES:

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- 1. LNAV-VNAV minima not applicable for Baro-VNAV equipment if chart is annotated "Baro-VNAV NA" or when below the minimum published temperature, e.g., Baro-VNAV NA below -17°C (2°F).
- 2. DME/DME based RNP-0.3 systems may be used only when a chart note indicates DME/DME availability; e.g., "DME/DME RNP-0.3 Authorized." Specific DME facilities may be required; e.g., "DME/DME RNP-0.3 Authorized. ABC, XYZ required."

## LNAV (Lateral navigation)

Must have IFR approach approved GPS, WAAS, or RNP-0.3 system. Other RNAV systems require special approval. NOTE: DME/DME based RNP-0.3 systems may be used only when a chart note indicates DME/DME availability; e.g., "DME/DME RNP-0.3 Authorized." Specific DME facilities may be required; e.g., "DME/DME RNP-0.3 Authorized. ABC, XYZ required."

#### LANDING MINIMA FORMAT

In this example airport elevation is 1179, and runway touchdown zone elevation is 1152. Aircraft Approach Category
HAT/HATh DΔ (RVR 100's of feet) All weather Straight-in ILS CATEGORY В **\**D to Runway 27 minimums in S-ILS 27 1352/24 200 (200-1/2) parentheses not 1440/50 applicable to Civil S-LOC 27 1440/24 288 (300-1/2) 288 (300-1) Pilots. Straight-in 1540-1 1740-2 Military Pilots 1640-1 1640-11/2 with Glide Slope CIRCLING refer to appro-361 (400-1) 461 (500-1) 461 (500-11/2) 561 (600-2) Inoperative or priate regulations. not used to MDA нÀА Visibility in Statute Miles Runway 27

## TERMS/LANDING MINIMA DATA

COPTER MINIMA ONLY

	CATEGORY	COPTER	
	H-176°	680-1/2 363 (400-1/2)	
ont	er Approach Dir	Pection Height of MDA/DA No circling minimums	are provided

Above Landing Area (HAL)

#### RADAR MINIMA

					HAT/				HAT/	
				DA/	HATh/			DA/	HATh	/
	RWY	GS/TCH/RPI	CAT	MDA-VIS	HAA	CEIL-VIS	CAT	MDA-VIS	HAA	CEIL-VIS
PAR (c)	10	2.5°/42/1000	ABCDE	<b>195</b> /16	100	(100-1/4)			Visibi	ility
(d)	28	2.5°/48/1068	ABCDE	<b>187</b> /16	100	(100-1/4)		/		100's of feet)
ASR	10		ABC	<b>560</b> /40	463	(500-34)	D	<b>560</b> /50	463	(500-1)
			Е	<b>580</b> /60	463	(500-11/4)				
	28		AB	<b>600</b> /50	513	(600-1)	C	<b>600</b> /60	513	(600-11/4)
			DE	600-11/2	513	(600-11/2)				
CIR (b)	10		AB	<b>560</b> -1¼	463	(500-11/4)	C	<b>560</b> -1½	463	(500-11/2)
	28		AB	600-11/4	503	(600-11/4)	C	600-11/2	503	(600-11/2)
	10,	28	DE	<b>660-</b> 2	563	(600-2)				
		Visibility i	n Statute <i>I</i>	∧iles ∕		All r	ninimum	s in parenthes	es not o	applicable to C

Radar Minima:

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All minimums in parentheses not applicable to Civil Pilots. Military Pilots refer to appropriate regulations.

- Minima shown are the lowest permitted by established criteria. Pilots should consult applicable directives for their category of aircraft.
- 2. The circling MDA and weather minima to be used are those for the runway to which the final approach is flown- not the landing runway. In the above RADAR MINIMA example, a category C aircraft flying a radar approach to runway 10, circling to land on runway 28, must use an MDA of 560 feet with weather minima of 500-1½.
- Alternate Minimums not standard. Civil users refer to tabulation. USA/USN/USAF pilots refer to appropriate regulations.
- A NA Alternate minimums are Not Authorized due to unmonitored facility or absence of weather reporting service.
- Take-off Minimums not standard and/or Departure Procedures are published. Refer to tabulation.

#### AIRCRAFT APPROACH CATEGORIES

Aircraft approach category indicates a grouping of aircraft based on a speed of VREF, if specified, or if VREF not specified, 1.3 VSO at the maximum certificated landing weight. VREF, VSO, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry. Helicopters are Category A aircraft. An aircraft shall fit in only one category. However, if it is necessary to operate at a speed in excess of the upper limit of the speed range for an aircraft's category, the minimums for the category for that speed shall be used. For example, an airplane which fits into Category B, but is circling to land at a speed of 145 knots, shall use the approach Category D minimums. As an additional example, a Category A airplane (or helicopter) which is operating at 130 knots on a straight-in approach shall use the approach Category C minimums. See following category limits:

#### MANEUVERING TABLE

Approach Category	Α	В	С	D	E
Speed (Knots)	0-90	91-120	121-140	141-165	Abv 165

#### Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 1800 RVR, use 2400 RVR with the resultant visibility of 1/2 mile.

RVR	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	1/4	4500	7/8
2400	<i>y</i> <sub>2</sub>	5000	1
3200	5∕8	6000	11/4
4000	3/4		

# THE RATE OF CLIMB TABLE HAS BEEN INTENTIONALLY REMOVED.

PLEASE SEE THE INSIDE BACK COVER PAGE FOR THE COMBINED CLIMB/DESCENT TABLE.

#### 07074 GENERAL INFO

#### GENERAL INFORMATION

This publication is issued every 56 days and includes Standard Instrument Approach Procedures (SIAPS), Standard Instrument Departures (SIDs), Standard Terminal Arrivals (STARs), IFR Take-off Minimums and (Obstacle) Departure Procedures (ODPs), IFR Alternate Minimums, and Radar Instrument Approach Minimums for use by civil and military aviation. The organization responsible for SIAPs, Radar Minimums, SIDs, STARs and graphic ODPs is identified in parentheses in the top margin of the procedure; e.g., (FAA), (USA), (USAF), (USN). SIAPS with the (FAA) designation are regulated under 14 CFR, Part 97. See 14 CFR, Part 91.175 (a) and the AIM for further details. 14 CFR, Part 91.175 (g) and the Special Notices section of the Airport/Facility Directory contains information on civil operations at military airports.

#### STANDARD TERMINAL ARRIVALS AND DEPARTURE PROCEDURES

The use of the associated codified STAR/DP and transition identifiers are requested of users when filing flight plans via teletype and are required for users filing flight plans via computer interface. It must be noted that when filing a STAR/DP with a transition, the first three coded characters of the STAR and the last three coded characters of the DP are replaced by the transition code. Examples: ACTON SIX ARRIVAL, file (AQN.AQN6); ACTON SIX ARRIVAL, EDNAS TRANSITION, file (EDNAS.AQN6). FREEHOLD THREE DEPARTURE, file (FREH3.RBV), FREEHOLD THREE DEPARTURE, ELWOOD CITY TRANSITION, file (FREH3.EWC).

RNAV DP and STAR. Effective March 15,2007, these procedures, formerly identified as Type-A and Type-B, will be designated as RNAV 1 in accordance with amended Advisory Circular (AC) and ICAO terminology.

Refer to AC 90-100A U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS and the Aeronautical Information Manual for additional guidance regarding these procedures.

#### Standard RNAV 1 Procedure Chart Notes

NOTE: RNAV 1

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NOTE: DME/DME/IRU or GPS required

Some procedures may require use of GPS and will be identified by a "GPS required" note.

#### **RNAV 1 Procedure Characteristics and Operations**

- 1. Require use of an RNAV system with DME/DME/IRU, and/or GPS inputs.
- 2. Require use of a CDI, flight director, and/or autopilot, in lateral navigation mode, for flight guidance while operating on RNAV paths (track, course, or direct leg). Other methods providing an equivalent level of performance may be acceptable.
- 3. RNAV paths may start as low as 500 feet above airport elevation.

#### 10042 GENERAL INFO

#### PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Available pilot controlled lighting (PCL) systems are indicated as follows:

- 1. Approach lighting systems that bear a system identification are symbolized using negative symbology, e.g., 🚳, 👁, 🤡
- 2. Approach lighting systems that do not bear a system identification are indicated with a negative "•" beside the name. A star (\*) indicates non-standard PCL, consult Directory/Supplement, e.g., •\*

To activate lights, use frequency indicated in the communication section of the chart with a 0 or the appropriate lighting system identification e.g., UNICOM 122.8 0, 🚵

KEY MIKE

FUNCTION

7 times within 5 seconds 5 times within 5 seconds

Highest intensity available

5 times within 5 seconds 3 times within 5 seconds Medium or lower intensity (Lower REIL or REIL-off) Lowest intensity available (Lower REIL or REIL-off)

#### CHART CURRENCY INFORMATION

Date of Latest Revision

09365

The Date of Latest Revision identifies the Julian date the chart was added or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest revision of any kind has been made to the chart.

FAA Procedure	Orig 31DEC09 +	Procedure Amendment
Amendment Number	Amdt 2B 12MAR09	Effective Date

The FAA Procedure Amendment Number represents the most current amendment of a given procedure. The Procedure Amendment Effective Date represents the AIRAC cycle date on which the procedure amendment was incorporated into the chart. Updates to the amendment number & effective date represent procedural/criteria revisions to the charted procedure, e.g., course, fix, altitude, minima, etc.

NOTE: Inclusion of the "Procedure Amendment Effective Date" will be phased in as procedures are amended. As this occurs, the Julian date will be relocated to the upper right corner of the chart.

#### MISCELLANEOUS

★ Indicates a non-continuously operating facility, see A/FD or flight supplement. "Radar required" on the chart indicates that radar vectoring is required for the approach. Distances in nautical miles (except visibility in statute miles and Runway Visual Range in hundreds of feet). Runway Dimensions in feet. Elevations in feet. Mean Sea Level (MSL). Ceilings in feet above airport elevation. Radials/bearings/headings/courses are magnetic. Horizontal Datum: Unless otherwise noted on the chart, all coordinates are referenced to North American Datum 1983 (NAD 83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

Terrain is scaled within the neat lines (planview boundaries) and does not accurately underlie not-to-scale distance depictions or symbols.

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## **ABBREVIATIONS**

ADF	Automatic Direction Finder
ALS	Approach Light System
ALSF	Approach Light System with
	Seauenced Flashina Liahts
AP	Autopilot System
APCH	
APP CON	Approach Control
ARR	Arrival
	Automated Surface Observing
A303	System
ASD/DAD	Published Radar Minimums at
A3K/ FAK	this Airport
ATIC	Automatic Terminal Information
A115	
AVA/OS	Service Automated Weather Observing
AWO3	
	System
AZ	
BC	
BND	
C	
CAT	
CCW	
Chan	
CLNC DEL	Clearance Delivery
CNF	Computer Navigation Fix
CTAF	Common Traffic Advisory
	Frequency
CW	.Clockwise
DA	Decision Altitude
DA DER	Decision Altitude Departure End of Runway
DER	Departure End of Runway
DERDH	Departure End of Runway Decision Height
DERDH	Departure End of Runway Decision Height Distance Measuring Equipment
DERDHDME	Departure End of Runway Decision Height Distance Measuring Equipment Elevation
DERDHDMEELEVEMAS	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System
DERDHDMEELEVEMAS	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System
DERDHDMEELEVEMASFAF	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix
DERDHDMEELEVEMASFAFFD	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix -Flight Director System Fan Marker Flight Management System Ground Communications Outlet
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix -Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport Height above Landing
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport Height above Landing Height above Touchdown
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Landing Height above Touchdown Height Above Threshold
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Landing Height above Louchdown Height Above Threshold Head-up Guidance System
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Gilde Slope Height above Airport Height above Intershold Height Above Threshold Head-up Guidance System High Intensity Runway Lights
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport Height above Landing Height above Touchdown Height Above Threshold Head-up Guidance System High Intensity Runway Lights Head-up Display
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport Height above Landing Height above Touchdown Height Above Threshold Head-up Guidance System High Intensity Runway Lights Head-up Display Initial Approach Fix
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport Height above Londing Height above Touchdown Height Above Threshold Head-up Guidance System High Intensity Runway Lights Head-up Display Linitial Approach Fix International Civil Aviation
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport Height above Landing Height above Touchdown Height Above Threshold Head-up Guidance System High Intensity Runway Lights Head-up Display Initial Approach Fix International Civil Aviation Oraanization
DER	Departure End of Runway Decision Height Distance Measuring Equipment Elevation Engineered Material Arresting System Final Approach Fix Flight Director System Fan Marker Flight Management System Ground Communications Outlet Ground Point of Interception Global Positioning System Glide Slope Height above Airport Height above Landing Height above Touchdown Height Above Threshold Head-up Guidance System High Intensity Runway Lights Head-up Display Initial Approach Fix International Civil Aviation Organization Intermediate Fix

INT	. Intersection
	Localizer Type Directional Aid
Ldg	
LDĬN	
LIRL	
LOC	
	Lead Radial. Provides at least
	2 NM (Copter 1 NM) of lead to
	assist in turning onto the
	intermediate/final course.
MALS	
	Light System
MALSR	Medium Intensity Approach
	Light System with RAIL
MAP	Missed Approach Point
MDA	Minimum Descent Altitude
MIRI	Medium Intensity Runway Light
MLS	Microwave Landina System
MM	Middle Marker
N/A	Not Applicable
NA	Not Authorized
	Non-directional Radio Beacon
NFD	
NM	Nautical Mile
NoPT	No Procedure Turn Required
11011	(Procedure Turn shall not be
	executed without ATC
	clearance)
ODALS	
ODALO	Light System
ODP	Obstacle Departure Procedure
OM	
PRM	
R	
	. Radio Altimeter setting height
RΔII	Runway Alignment Indicator
TO-TIE	Lights
RCLS	Runway Centerline Light
NCLO	System
PEII	Runway End Identifier Lights
RF	
RNAV	
RNP	
N 11	Performance
RPI	.Runway Point of Intercept(ion)
RRL	Runway Remaining Lights
Rwy	
RVR	
S	
SAIS	Short Approach Light System
SSALR	Simplified Short Approach
	Light System with RAIL
SDF	Simplified Directional Facility
TAA	
17 V	. rommar Arrivar Arca

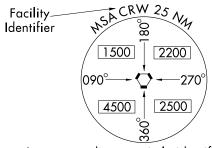
# GENERAL INFO

TACTCH.	
TDZ	•
TDZE	. Touchdown Zone Elevation
TDZ/CL	Touchdown Zone and Runway
	Centerline Lighting
TDZL	Touchdown Zone Lights
THR	Threshold
THRE	Threshold Elevation
TODA	Take-off Distance Available
TORA	Take-off Run Available
TR	Track
VASI	Visual Approach Slope
	Indicator
VDP	
VGSI	Visual Glide Slope Indicator
WP/WPT	Waypoint (RNAV)

#### PLANVIEW SYMBOLS TERMINAL ROUTES RADIO AIDS TO NAVIGATION -165° 110.1 Underline indicates No Voice transmitted on this frequency Procedure Track Procedure Turn ..... $\bigcirc$ vor $\square$ vor/dme Missed Approach (Type degree and point of turn optional) NDB O NDB/DME Visual Flight Path OD LOM/LMM (Compass locator at Outer Marker/Middle Marker) 3100 NoPT 5.6 NM to GS Intept • 045°• Marker Beacon (14.2 to LOM) Minimum Altitude\_ Marker beacons that are not specifically part of - 2000 the procedure but underlie the final approach - 155° course are shown in screened color. Feeder Route (15.1)Penetrates Special Localizer (LOC/LDA) Course Mileage<sup>2</sup> Use Airspace Right side shading- Front course; Left side shading- Back Course - SDF Course HOLDING PATTERNS In lieu of MLS Approach Azimuth Procedure Turn MICROWAVE-(IAS) (Y) TACAN must Chan 514 MLS be in "Y" mode 090°<del>∍</del> M-VDZ Identifier to receive **HOLD 8000** Glidepath 6.20° distance Arrival Missed Approach DME 111.5 Chan 48(Y) information. 360°-SCOTT -180° Chan 59 VHF SKE ::-Holding pattern with max. restricted airspeed: Paired Frequency (175K) applies to all altitudes. (112.2)(210K) applies to altitudes above 6000' to and O LOC/DME including 14000'. Arrival Holding Pattern altitude restrictions O LOC/LDA/SDF/MLS Transmitter (shown when installation is offset from its will be indicated when they deviate from the normal postion off the end of the runway.) Limits will only be specified when they deviate Waypoint Data from the standard. DME fixes may be shown. Waypoint Coordinates PRAYS -Name FIXES/ATC REPORTING REQUIREMENTS N38°58.30′ W89°51.50 Reporting Point -112.7,CAP 187.1°-56.2 Frequency Name (Compulsory) Intersection - 590 -Radial-Distance Identifier △ Name (Non-Compulsory) Reference Facility (Facility to Elevation Waypoint) WAYPOINT WAYPOINT Primary Navaid (Compulsory) (Non-Compulsory) Secondary Navaid with Coordinate Values LMM · MAP WP LIMA FLYOVER POINT 114.5 LIM :--LIMA (Flyover) Chan 92 248 NT = Computer Navigation Fix (CNF) S12°00.80′ W77°07.00 x (NAME) ("x" omitted when it conflicts with runway pattern) **AUSTN INT** MISCELLANEOUS 15) DME Distance From Facility ARC/DME/RNAV Fix VOR Changeover Point S12° 00.52′ End of Rwy Coordinates Radial line and value (DOD only) W77°06.91′ LR-198 — Lead Radial Distance not to scale — LB-198 <del>— → Lead Bearing</del> – — International Boundary

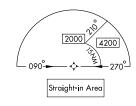
#### PLANVIEW SYMBOLS

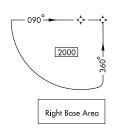
## MINIMUM SAFE ALTITUDE (MSA)

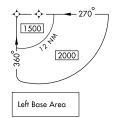


(arrows on distance circle identify sectors)

## TERMINAL ARRIVAL AREA (TAA)







#### SPECIAL USE AIRSPACE



R-Restricted P-Prohibited W-Warning A-Alert

#### **OBSTACLES**

- Spot Elevation
- Highest Spot Elevation Group of Obstacles Μ
- Λ Obstacle
- Doubtful accuracy



Primary and Secondary (named in planviéw)



Seaplane Base



are depicted as a dashed vertical

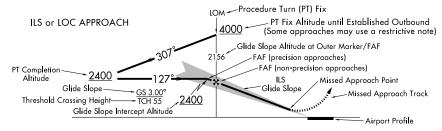
line

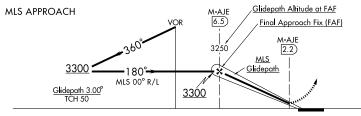
#### PROFILE VIEW

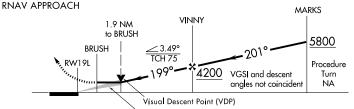
Two different methods are used for vertical guidance:

Iwo different methods are used for vertical guidance: a. "GS" indicates an electronic glide slope or barometric vertical guidance is present. In the case of an Instrument Landing System (ILS) and Wide Area Augmentation System (WAAS) LPV approach procedures, an electronic signal provides vertical guidance. Barometric vertical guidance is provided for RNP and LNAV/VNAV instrument approach procedures. All ILS, LPV, RNP, and LNAV/VNAV will be in this format GS 3.00°, located in the lower left or right corner.

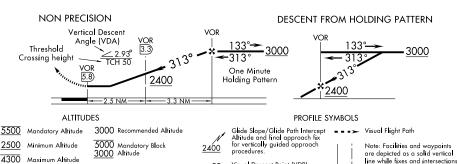
<u>≤3.00°</u> ∩H 55\_, indicating a b. Other charts without electronic or barometric vertical guidance will be in this format TCH 55, indicating a non-precision vertical descent angle to assist in preventing controlled flight into terrain. On Civil (FAA) procedures, this information is placed above or below the procedure track following the fix it is based on.







Visual segment below MDA/DA is clear of obstacles on 34:1 slope. (Absence of shaded area indicates 34:1 is not clear.)



Visual Descent Point (VDP)

**LEGEND** 

03 JUN 2010 to 01 JUL 2010

## LEGEND

#### LEGEND STANDARD TERMINAL ARRIVAL (STAR) CHARTS DEPARTURE PROCEDURE (DP) CHARTS RADIO AIDS TO NAVIGATION **ROUTES** 4500 MEA-Minimum Enroute Altitude $\langle \rangle$ VOR **TACAN** \*3500 MOCA-Minimum Obstruction Clearance Altitude 270°• Departure Route - Arrival Route VOR/DME 0 NDB/DME (65) Mileage between Radio Aids, Reporting Points, and Route Breaks VORTAC LOC/DME Transition Route 0 IOC NDB (Non-directional R-275 -— Radial line and value Radio Beacon) ••••• Lost Communications Track LMM, LOM (Compass locator) J80 Airway/Jet Route Identification V12 Marker Beacon Holdina (IAS) Changeover Point Localizer Course Pattern SDF Course Holding pattern with max. restricted airspeed (175K) applies to all altitudes (210K) applies to altitudes above 6000' to and (Y) TACAN must be placed (T) indicates frequency in "Y" mode to receive including 14000' protection range Identifier distance information SPECIAL USE AIRSPACE ORLANDO Frequency R-Restricted W-Warning 25 (T) ORL /:=:. R-352 Chan 59 (Y) Geographic P-Prohibited A-Alert N28°32.56′ -\W81°20.10′-Position **ALTITUDES** L-19, H-5 DME or Underline indicates **TACAN** 2300 5500 <u>4800</u> no voice transmitted Enroute Chart Channe Mandatory Minimum Maximum on this frequency Reference Altitude Altitude Altitude Coordinates (Cross at or above) (Cross at) (Cross at or below) Waypoint PRAYS -Name → Altitude change at other than Radio Aids N38°58.30′ W89°51.50 CROSSING ALTITUDES 187.1°-56.2 Frequency Radial-Distance $\overline{5500}$ (ATC) 2300 (ATC) $\overline{4800}$ (ATC) Identifier (Facility to Reference Facility 4300 1700 Elevation Waypoint) Minimum required altitude FIXES/ATC REPORTING REQUIREMENTS ATC altitude restriction Reporting Points AIRPORTS N00° 00.00′ DME Mileage W00° 00.00′ (when not obvious) Joint ▲ Fix-Compulsory and ♠ Civil 🔷 Civil-Military Military △ Non-Compulsory Position Report **NOTES** All mileages are nautical. **≫** DME fix Distance not to scale Indicates a non-continuously operating facility, see A/FD or flight supplement. WAYPOINT WAYPOINT All radials, bearings are magnetic. (Compulsory) (Non-Compulsory) All altitudes/elevations are in feet-MSL. MRA- Minimum Reception Altitude. FLYOVER POINT MAA- Maximum Authorized Altitude. (NAME2.NAME) - Example of DP flight plan Computer Code. Mileage Breakdown/ (NAME.NAME2) - Example of STAR flight plan Computer Navigation Fix (CNF) Computer Code. N00° 00.00′ SL-0000 (FAA) - Example of a chart reference number. W00° 00.00′ Take-Off Minimums not standard and/or Departure Procedures are published.

#### AIRPORT DIAGRAM/AIRPORT SKETCH

Runways			
Hard Surface	Other Than Hard Surface	Stopways,Taxiwa Parking Areas, Water Runways	ys, Displaced Threshold
≥ ≥ Closed Runway	x x x Closed Taxiway	 Under Construction	Metal Surface
e.g., BAk not app <b>l</b> i	(12, MA-1A etc	cific arresting gear , shown on airpor lots. Military Pilots ations.	t diagrams,
ARRESTING	rectional G SYSTEM F FEATURES	bi-directional	} Jet Barrier
Buildings Tanks Obstructio Airport Be Runway Radar Refl Control To	nsacon #ectorswer #		Δ Δ Σ

# When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A **D** symbol is shown to indicate runway declared distance information available, see appropriate A/FD, Alaska or Pacific Supplement for distance information.

Helicopter Alighting Areas (H) (H) (A) (H)
Negative Symbols used to identify Copter Procedures

Runway Threshold elevation......THRE 123
Runway TDZ elevation......TDZE 123

or equal to 0.3%)

Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or ½ minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

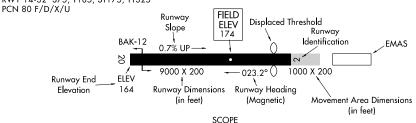
#### NOTE:

All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in FLIP. (Foreign Only)

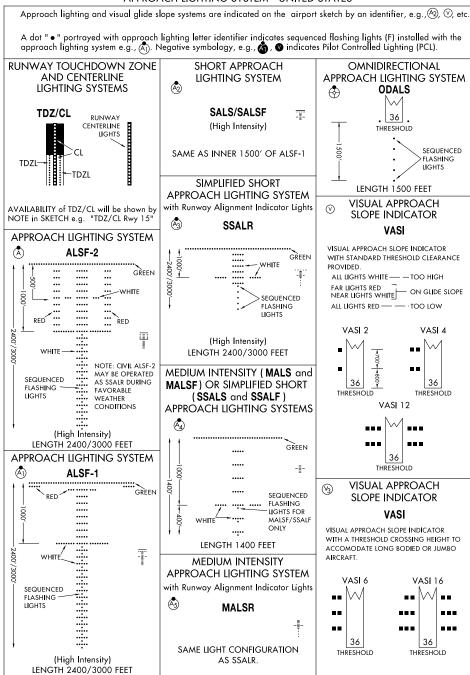
Runway Weight Bearing Capacity/or PCN Pavement Classification Number is shown as a codified expression.

Refer to the appropriate Supplement/Directory for applicable codes e.g.,

RWY 14-32 S75, T185, ST175, TT325

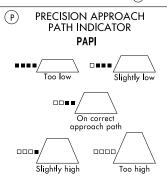


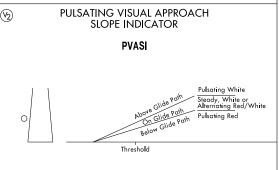
Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations and provide information for updating Computer Based Navigation Systems (I.E., INS, GPS) aboard aircraft. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.



APPROACH LIGHTING SYSTEM - UNITED STATES

A dot " • " portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., (A). Negative symbology, e.g., (A), (V) indicates Pilot Controlled Lighting (PCL).





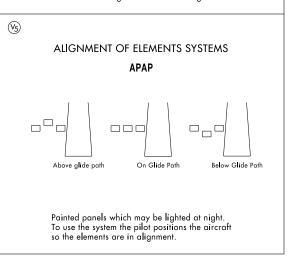
CAUTION: When viewing the pulsating visual approach slope indicators in the pulsating white or pulsating red sectors, it is possible to mistake this lighting aid for another aircraft or a ground vehicle. Pilots should exercise caution when using this type of system.

## $(V_1)$ "T"-VISUAL APPROACH SLOPE INDICATOR "T"-VASI "T" ON BOTH SIDES OF RWY ALL LIGHTS VARIABLE WHITE. CORRECT APPROACH SLOPE-ONLY CROSS BAR VISIBLE. UPRIGHT "T"- FLY UP. INVERTED "T"- FLY DOWN. RED "T"- GROSS UNDERSHOOT.

Legend: □ White ■ Red

## $(V_4)$ TRI-COLOR VISUAL APPROACH SLOPE INDICATOR TRCV On Glide Path Below Glide Path

CAUTION: When the aircraft descends from green to red, the pilot may see a dark amber color during the transition from green to red.



## MLS CHANNELING AND FREQUENCY PAIRING TABLE

	\#\ <del>=</del>			\#I=	=.0		\#I	<b>-101</b> 11
MLS CHANNEL	VHF FREQUENCY	TACAN CHANNEL	MLS CHANNEL	VHF FREQUENCY	TACAN CHANNEL	MLS CHANNEL	VHF FREQUENCY	TACAN CHANNEL
500	108.10	18X	568	109.45	31Y	636	114.15	88Y
502	108.30	20X	570	109.55	32Y	638	114.25	89Y
504	108.50	22X	572	109.65	33Y	640	114.35	90Y
506	108.70	24X	574	109.75	34Y	642	114.45	91Y
508	108.90	26X	576	109.85	35Y	644	114.55	92Y
510	109.10	28X	578	109.95	36Y	646	114.65	93Y
512	109.30	30X	580	110.05	37Y	648	114.75	94Y
514	109.50	32X	582	110.15	38Y	650	114.85	95Y
516	109.70	34X	584	110.25	39Y	652	114.95	96Y
518	109.90	36X	586	110.35	40Y	654	115.05	97Y
520	110.10	38X	588	110.45	41Y	656	115.15	98Y
522	110.30	40X	590	110.55	42Y	658	115.25	99Y
524	110.50	42X	592	110.65	43Y	660	115.35	100Y
526	110.70	44X	594	110.75	44Y	662	115.45	101Y
528	110.90	46X	596	110.85	45Y	664	115.55	102Y
530	111.10	48X	598	110.95	46Y	666	115.65	103Y
532	111.30	50X	600	111.05	47Y	668	115.75	104Y
534	111.50	52X	602	111.15	48Y	670	115.85	105Y
536	111.70	54X	604	111.25	49Y	672	115.95	106Y
538	111.90	56X	606	111.35	50Y	674	116.05	107Y
540	108.05	17Y	608	111.45	51Y	676	116.15	108Y
542	108.15	18Y	610	111.55	52Y	678	116.25	109Y
544	108.25	19Y	612	111.65	53Y	680	116.35	110Y
546	108.35	20Y	614	111 <i>.75</i>	54Y	682	116.45	111Y
548	108.45	21Y	616	111.85	55Y	684	116.55	112Y
550	108.55	22Y	618	111.95	56Y	686	116.65	113Y
552	108.65	23Y	620	113.35	80Y	688	116.75	114Y
554	108.75	24Y	622	113.45	81Y	690	116.85	11 <i>5</i> Y
556	108.85	25Y	624	113.55	82Y	692	116.95	116Y
558	108.95	26Y	626	113.65	83Y	694	117.05	11 <i>7</i> Y
560	109.05	27Y	628	113.75	84Y	696	11 <i>7</i> .15	118Y
562	109.15	28Y	630	113.85	85Y	698	117.25	119Y
564	109.25	29Y	632	113.95	86Y			

114.05

87Y

109.35

30Y

634

566

# THERE ARE NO LAND AND HOLD SHORT OPERATIONS (LAHSO) FOR ALASKA

LAHSO is an acronym for "Land and Hold Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
BATTLE CREEK, MI W.K. KELLOGG (BTL)	05	13/31	7,000 feet
DETROIT, MI COLEMAN A. YOUNG MUNI (DET)	15	07/25	4,900 feet
FLINT, MI BISHOP INTL (FNT)	09 36	18/36 09/27	4,100 feet 6,300 feet
JACKSON, MI JACKSON COUNTY-REYNOLDS FIELD (JXN)	24	14/32	3,406 feet
TRAVERSE CITY, MI			
CHERRY CAPITAL (TVC)	18 28	10/28 18/36	2,850 feet 5,500 feet

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Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
AKRON, OH			
AKRON-CANTON RGNL (CAK)	05	01/19	4,300 feet
	19	05/23	3,100 feet
BLOOMINGTON, IN			
MONROE COUNTY (BMG)	1 <i>7</i>	06/24	6,100 feet
	• •	,	.,
COLUMBUS, OH			
OHIO STATE UNIVERSITY (OSU)	05	09L/27R	3,350 feet
	09L	05/23	2,550 feet
	09R	14/32	3,300 feet
	14	09R/27L	2,750 feet
	23	09R/27L	2,500 feet
	27L	05/23	3,300 feet
FORT WAYNE, IN			
FORT WAYNE INTL (FWA)	05	14/32	9,150 feet
TORT WATTE HATE (TWA)	14	05/23	5,650 feet
	27		2,700 feet
	27	05/23	2,700 reer
LAFAYETTE, IN			
PURDUE UNIVERSITY (LAF)	10	05/23	4,600 feet
MANSFIELD, OH			
MANSFIELD LAHM RGNL (MFD)	05	14/32	4,350 feet
MANSITEED LATIM KONE (MID)			
	14	05/23	6,100 feet
MUNCIE, IN			
DELAWARE COUNTY RGNL (MIE)	14	02/20	4,300 feet
	20	14/32	3,500 feet
TERRE HAUTE, IN			
TERRE HAUTE INTL-HULMAN FIELD (HUF)	05	18/36	4,650 feet
TERRE HAUTE HATE-HOLMAN HELD (HOF)	18		3,300 feet
		05/23	
	23	18/36	3,450 feet
	32	05/23	4,237 feet
	36	14/32	3,200 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
ALTON/ST. LOUIS, IL			
ST. LOUIS RGNL (ALN)	29	17/35	6,850 feet
	35	11/29	5,100 feet
APPLETON, WI			
OUTAGAMIE COUNTY RGNL (ATW)	03	12/30	3,300 feet
	21	12/30	4,100 feet
	30	03/21	3,400 feet
BLOOMINGTON/NORMAL, IL CENTRAL IL REGL ARPT AT			
BLOOMINGTON-NORMAL (BMI)	02	11/29	4,600 feet
DESCRIPTION TO TOTAL TOTAL (DIVIN)	11	02/20	6,200 feet
CARBONDALE-MURPHYSBORO, IL		02/20	0,200 .00.
SOUTHERN ILLINOIS (MDH)	06	18L/36R	3,100 feet
occinizatives (men)	24	18R/36L	3,800 feet
	36R	06/24	3,000 feet
CHAMPAIGN-URBANA, IL	oon	00, 24	0,000 1001
UNIVERSITY OF ILLINOIS-WILLARD (CMI)	04	14L/32R	3,600 feet
over a land to the state of the control of the cont	14L	04/22	3,550 feet
	18	04/22	4,100 feet
	22	18/36	4,700 feet
	32R	04/22	4,050 feet
	36	14L/32R	3,950 feet
CHICAGO, IL			-,,
CHICAGO-O'HARE INTL (ORD)	09R	14L/32R	6,100 feet
,	10	TWY S	12,156 feet
	22R	09R/27L	6,050 feet
	27L	04L/22R	5,700 feet
CHICAGO/AURORA, IL		,	,
AURORA MUNI (ARR)	09	18/36	3,450 feet
, ,	1.5	09/27	3,900 feet
	27	15/33	4,000 feet
CHICAGO/PROSPECT HEIGHTS/WHEELING, IL			
CHICAGO EXECUTIVE (PWK)	16	12/30	3,623 feet
DECATUR, IL			
DECATOR, IL	06	12/30	4,800 feet
DECATOR (DEC)	12	06/24	4,450 feet
	18	06/24	4,450 feet
	24	12/30	3,000 feet
	24	18/36	8,000 feet
	30	18/36	5,050 feet
	36	12/30	4,800 feet
	30	12/30	4,000 1661

(SEE CONTINUATION PAGE FOR MORE LISTINGS)

LAHSO is an acronym for "Land and Hold Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
DULUTH, MN DULUTH INTL (DLH)	09	03/21	8,950 feet
GRAND FORKS, ND GRAND FORKS INTL (GFK)	27R 35L	17R/35L 09L/27R	3,000 feet 4,600 feet
MINNEAPOLIS, MN MINNEAPOLIS-ST PAUL INTL/ WOLD-CHAMBERLAIN (MSP)	22 30L	TWY K TWY A9/W9	8,550 feet 8,150 feet
ROCHESTER, MN ROCHESTER INTL (RST)	02 13 31	13/31 02/20 02/20	5,850 feet 5,270 feet 3,200 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
HUTCHINSON, KS			
HUTCHINSON MUNI (HUT)	13	04/22	5,250 feet
	1 <i>7</i>	04/22	3,200 feet
	22	13/31	3,400 feet
	31	17/35	2,800 feet
OLATHE, KS			
NEW CENTURY AIRCENTER (IXD)	18	04/22	2,700 feet
	36	04/22	3,650 feet
	22	18/36	3,300 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
CEDAR RAPIDS, IA THE EASTERN IOWA (CID)	09	13/31	5,800 feet
COLUMBIA, MO	02	13/31	6,050 feet
COLUMBIA RGNL (COU)	13	02/20	3,500 feet
DES MOINES, IA	05	13/31	6,350 feet
DES MOINES INTL (DSM)	13	05/23	5,950 feet
DUBUQUE, IA	31	18/36	4,800 feet
DUBUQUE RGNL (DBQ)	36	13/31	4,900 feet
JOPLIN, MO	13	18/36	3,250 feet
JOPLIN RGNL (JLN)	18	13/31	4,900 feet
KANSAS CITY, MO CHARLES B. WHEELER DOWNTOWN (MKC)	19	03/21	3,850 feet
SIOUX CITY, IA	X) 13	17/35	5,400 feet
SIOUX GATEWAY/COL. BUD DAY FIELD (SU:	17	13/31	5,650 feet
Springfield, mo	1 <i>4</i>	02/20	6,200 feet
Springfield-branson national (SGF)	20	14/32	4,550 feet
WATERLOO, IA WATERLOO RGNL (ALO)	06 12 18 24 30 36	12/30 06/24 06/24 18/36 18/36 12/30	3,900 feet 6,100 feet 4,850 feet 3,950 feet 4,800 feet 3,650 feet

LAHSO is an acronym for "Land and Hold Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
BEDFORD, MA			
LAURENCE G. HANSCOM FIELD (BED)	05	11/29	3,000 feet
	11	05/23	2,650 feet
	29	05/23	3,650 feet
BEVERLY, MA		,	,
BEVERLY MUNI (BVY)	09	16/34	3,450 feet
	16	09/27	4,000 feet
BOSTON, MA			
GENERAL EDWARD LAWRENCE LOGAN	04L	15L/33R	5,250 feet
INTL (BOS)	1 <i>5</i> R	09/27	6,800 feet
	22L	09/27	6,400 feet
	27	04R/22L	5,650 feet
BRIDGEPORT, CT			
IGOR I. SIKORSKY MEMORIAL (BDR)	06	11/29	3,700 feet
	11	06/24	3,350 feet
BURLINGTON, VT			
BURLINGTON INTL (BTV)	01	15/33	2,600 feet
	15	01/19	3,750 feet
	33	01/19	2,900 feet
HYANNIS, MA			
BARNSTABLE MUNI-BOARDMAN/			
POLANDO FIELD (HYA)	15	06/24	4,150 feet
	24	15/33	4,650 feet
NANTUCKET, MA			_
NANTUCKET MEMORIAL (ACK)	06	15/33	4,316 feet
	33	06/24	3,150 feet
NORWOOD, MA			6
NORWOOD MEMORIAL (OWD)	35	10/28	3,320 feet
DODTI AND ME			
PORTLAND, ME			5 000 (
PORTLAND INTL JETPORT (PWM)	11	18/36	5,800 feet
WINDSON LOCKS CT	18	11/29	3,500 feet
WINDSOR LOCKS, CT BRADLEY INTL (BDL)	0.4	01/10	( 000 [
DRADLET INIL (BDL)	06	01/19	6,000 feet
	24 33	15/33	5,850 feet
	33	06/24	4,550 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
ALBANY, NY	01	10/28	4,150 feet
ALBANY INTL (ALB)	28	01/19	3,750 feet
ATLANTIC CITY, NJ ATLANTIC CITY INTL (ACY)	04	13/31	3,550 feet
	13	04/22	3,600 feet
	31	04/22	5,750 feet
ELMIRA, NY	24	10/28	4,750 feet
ELMIRA/CORNING RGNL (ELM)	28	06/24	3,050 feet
FARMINGDALE, NY REPUBLIC (FRG)	32	01/19	3,650 feet
ISLIP, NY LONG ISLAND MAC ARTHUR (ISP)	06 10 15R 24 28	15R/33L 15R/33L 10/28 10/28 06/24	4,200 feet 3,000 feet 4,600 feet 4,600 feet 4,500 feet
NEW YORK, NY	04	13/31	4,600 feet 5,500 feet
LA GUARDIA (LGA)	31	04/22	
NEWARK, NJ NEWARK LIBERTY INTL (EWR)	11 04L 04R	04R/22L 11/29 11/29	5,700 feet 7,750 feet 8,100 feet
POUGHKEEPSIE, NY DUTCHESS COUNTY (POU)	06	15/33	3,150 feet
SYRACUSE, NY	10	15/33	7,700 feet
SYRACUSE HANCOCK INTL (SYR)	15	10/28	6,000 feet
TETERBORO, NJ	01	06/24	4,550 feet
TETERBORO (TEB)	06	01/19	3,750 feet

(SEE CONTINUATION PAGE FOR MORE LISTINGS)

LAHSO is an acronym for "Land and Hold Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
NEWPORT NEWS, VA			
NEWPORT NEWS/WILLIAMSBURG INTL (PHF	) 20	07/25	5,200 feet
	25	02/20	6,550 feet
NORFOLK, VA			
NORFOLK INTL (ORF)	14	05/23	2,850 feet
	23	14/32	6,300 feet
WILMINGTON, DE			
NEW CASTLE (ILG)	01	09/27	4,050 feet
	14	01/19	4,450 feet
	19	14/32	5,750 feet
	32	09/27	3,600 feet

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Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
erie,pa erie intl/tom ridge field (eri)	24	02/20	4,100 feet
HARRISBURG, PA CAPITAL CITY (CXY)	26	12/30	3,450 feet
LANCASTER, PA LANCASTER (LNS)	26	13/31	5,190 feet
PHILADELPHIA, PA NORTHEAST PHILADELPHIA (PNE)	24 33	15/33 06/24	4,150 feet 3,600 feet
PHILADELPHIA, PA PHILADELPHIA INTL (PHL)	09L 1 <i>7</i>	17/35 09L/27R	7,350 feet 4,400 feet
PITTSBURGH, PA ALLEGHENY COUNTY (AGC)	10	13/31	3,250 feet
READING, PA READING RGNL/CARL A. SPAATZ FIELD (RDG)	13 18	18/36 13/31	5,200 feet 3,050 feet
WILKES-BARRE/SCRANTON, PA WILKES-BARRE-SCRANTON INTL (AVP)	04	10/28	4,700 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
BOZEMAN, MT GALLATIN FIELD (BZN)	12	03/21	6841 feet
MOSES LAKE, WA GRANT COUNTY INTL (MWH)	04 14L 22 32R	14L/32R 04/22 14L/32R 04/22	4,700 feet 7,550 feet 4,650 feet 5,050 feet
PORTLAND, OR PORTLAND-HILLSBORO (HIO)	12	02/20	4,922 feet
SALEM, OR MCNARY FIELD (SLE)	31 34	16/34 13/31	3,150 feet 3,050 feet
SPOKANE, WA SPOKANE INTL (GEG)	07 21 25	03/21 07/25 03/21	2,800 feet 7,000 feet 4,350 feet
TWIN FALLS, ID JOSLIN FIELD-MAGIC VALLEY RGNL (TWF)	07 25	12/30 12/30	4,500 feet 3,600 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
HONOLULU, HI HONOLULU INTL (HNL) (PHNL)	04L	08L/26R	3,700 feet
	04R	08L/26R	6,250 feet
	08L	04L/22R	9,300 feet

## THERE ARE NO LAND AND HOLD SHORT OPERATIONS (LAHSO) FOR ARKANSAS OR OKLAHOMA

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
DALLAS-FORT WORTH, TX			
DALLAS-FORT WORTH INTL (DFW)	1 <i>7</i> C	TWY B	10,460 feet
	18R	TWY B	10,100 feet
	35C	TWY EJ	9,050 feet
	36L	TWY Z	10,650 feet
LONGVIEW, TX			
EAST TEXAS RGNL (GGG)	31	18/36	8,100 feet
	36	13/31	4,080 feet

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Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
WACO, TX			
WACO RGNL (ACT)	14	01/19	5,150 feet
	19	14/32	6,050 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
BATON ROUGE, LA BATON ROUGE METROPOLITAN,			
RYAN FIELD (BTR)	13	04L/22R	4,140 feet
	22R	13/31	3,450 feet
	22L	13/31	2,900 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
HOUSTON, TX			
GEORGE BUSH INTERCONTINENTAL/	26L	TWY NE	9,010 feet
HOUSTON (IAH)	08R	TWY NP	9,019 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
MEMPHIS, TN MEMPHIS INTL (MEM)	27	TWY N	8,450 feet
SMYRNA, TN			
SMYRNA (MQY)	01	14/32	3,000 feet
	14	01/19	3,409 feet
	32	01/19	3,950 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
CHARLESTON, SC			
CHARLESTON AFB/INTL (CHS)	03	15/33	5,543 feet
, , , , , , , , , , , , , , , , , , , ,	15	03/21	5,700 feet
	33	03/21	2,900 feet
GREENSBORO, NC			
PIEDMONT TRIAD INTL (GSO)	14	05R/23L	3,450 feet
, ,	23	14/32	9,200 feet
WINSTON-SALEM, NC			
SMITH REYNOLDS (INT)	33	04/22	6,010 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
DAYTONA BEACH, FL			
daytona beach intl (dab)	07L	TWY W	7,500 feet
	16	07L/25R	2,900 feet
FORT LAUDERDALE, FL		10/01	0.000 f
FORT LAUDERDALE EXECUTIVE (FXE)	26 31	13/31	3,000 feet 3,250 feet
JACKSONVILLE, FL	31	08/26	3,250 feet
CRAIG MUNI (CRG)	05	14/32	3,600 feet
en no morn (eno)	14	05/23	3,650 feet
LAKELAND, FL		00/ 20	5,555 .55.
LAKELAND LINDER RGNL (LAL)	05	09/27	2,500 feet
	09	05/23	6,000 feet
MIAMI, FL			
MIAMI INTL (MIA)	09	12/30	9,750 feet
ON ANDO EL	12	09/27	8,100 feet
ORLANDO, FL	0.5	10/01	4.500 (
EXECUTIVE (ORL)	25	13/31	4,500 feet
ORLANDO SANFORD (SFB)	09L	18/36	5,500 feet
	09C	18/36	3,150 feet
	18	09R/27L	4,624 feet
	27L	18/36	5,760 feet
	36	09L/27R	5,300 feet
201121110 271 611 71			
POMPANO BEACH, FL	1.0	15/00	2 222 (
POMPANO BEACH AIRPARK (PMP)	10 15	15/33 10/28	3,000 feet 3,800 feet
ST. PETERSBURG-CLEARWATER, FL	13	10/20	3,000 leel
ST. PETERSBURG-CLEARWATER INTL (PIE)	04	09/27	4,286 feet
	09	04/22	4,733 feet
	1 <i>7</i> L	04/22	7,557 feet
	22	17L/35R	4,514 feet
	35R	09/27	3,405 feet
SARASOTA (BRADENTON), FL			
SARASOTA/BRADENTON INTL (SRQ)	14	04/22	3,800 feet
TAMPA, FL			
TAMPA INTL (TPA)	18L	09/27	5,650 feet
IAMIA INIL (IIA)	27	18L/36R	4,350 feet
TITUSVILLE, FL	2,	102,000	4,000 1001
SPACE COAST RGNL (TIX)	09	18/36	4,035 feet
	36	09/27	3,750 feet
VERO BEACH, FL			
vero beach muni (vrb)	29L	04/22	4,700 feet
WEST DALLA DE ACIL EL			
WEST PALM BEACH, FL PALM BEACH INTL (PBI)	10L	14/32	3,200 feet
TALM DEACH INTE (PDI)	10L 14	14/32 10L/28R	3,200 feet 4,370 feet
	28R	14/32	3,725 feet
	2010	1-7, 52	0,, 20 1001

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
ATLANTA, GA			
HARTSFIELD-JACKSON ATLANTA INTL (ATL)	08L	TWY B13	8,490 feet
	09R	TWY J	8,620 feet
	26R	TWY H	8,600 feet
	27L	TWY P	8,600 feet
BIRMINGHAM, AL			
BIRMINGHAM INTL (BHM)	06	18/36	8,700 feet
	36	06/24	5,150 feet
SAVANNAH, GA			
SAVANNAH/HILTON HEAD INTL (SAV)	01	10/28	4,050 feet
	10	01/19	5,450 feet
	28	01/19	3,250 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
COLORADO SPRINGS, CO	30	17R/35L	7,450 feet
CITY OF COLORADO SPRINGS MUNI (COS)	35L	12/30	10,250 feet
PUEBLO, CO	1 <i>7</i>	08L/26R	5,850 feet
PUEBLO MEMORIAL (PUB)	26R	17/35	8,300 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
NAPA, CA			
NAPA COUNTY (APC)	18R	06/24	5,450 feet
	24	18R/36L	3,700 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
BURBANK, CA BOB HOPE (BUR)	15	08/26	4,250 feet
LONG BEACH, CA LONG BEACH (DAUGHERTY FIELD) (LGB)	12 25R 30	16L/34R 12/30 07L/25R	4,100 feet 3,400 feet 5,850 feet

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CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
LAS VEGAS, NV			
NORTH LAS VEGAS (VGT)	25	12R/30L	4,000 feet
	30L	07/25	4,000 feet
OGDEN, UT			
OGDEN-HINCKLEY (OGD)	03	07/25	4,700 feet
	07	03/21	3,450 feet
	21	16/34	4,550 feet
	34	07/25	3,850 feet
PRESCOTT, AZ			
ERNEST A. LOVE FIELD (PRC)	21L	12/30	5,150 feet

# LAND AND HOLD SHORT OPERATIONS (LAHSO) (CONTINUED)

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
GREEN BAY, WI			
AUSTIN STRAUBEL INTL (GRB)	18	06/24	2,692 feet
	24	18/36	6,050 feet
	36	06/24	4,932 feet
MADISON, WI			
DANE COUNTY RGNL-			
TRUAX FIELD (MSN)	03	14/32	3,400 feet
	18	03/21	4,850 feet
	21	18/36	6,450 feet
	32	18/36	5,300 feet
	36	14/32	7,050 feet
MARION, IL			
WILLIAMSON COUNTY RGNL (MWA)	20	11/29	6,650 feet
	29	02/20	4,650 feet
MOSINEE, WI			
CENTRAL WISCONSIN (CWA)	26	17/35	7,300 feet
	35	08/26	5,000 feet
ROCKFORD, IL			
CHICAGO/ROCKFORD INTL (RFD)	01	07/25	6,000 feet
	07	01/19	8,800 feet
SPRINGFIELD, IL			_
abraham lincoln capital (SPI)	04	13/31	3,200 feet
	22	13/31	4,150 feet
	31	04/22	3,350 feet
	36	13/31	3,000 feet

# LAND AND HOLD SHORT OPERATIONS (LAHSO) (CONTINUED)

CITY/AIRPORT WHITE PLAINS, NY WESTCHESTER COUNTY (HPN)	LDG RWY	HOLD-SHORT POINT	MEASURED DISTANCE
WESICHESIER COUNTY (HPN)	11	16/34	2,500 feet
	16	11/29	4,000 feet

An "airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or polygons designated as "HOT<sup>1</sup>", "HOT<sup>2</sup>", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

CITY/AIRPORT HOT SPOT DESCRIPTION \*

ANCHORAGE, AK
TED STEVENS ANCHORAGE
INTL (ANC) (PANC)

HOT 1 Confusing int in close proximity of Rwy 07L/25R.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION *
DETROIT, MI DETROIT METROPOLITAN		
WAYNE COUNTY (DTW)	HOT <sup>1</sup>	Rwy 04R/22L and Rwy 09L/27R.
	HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 03L/21R and Rwy 09L/27R.
DETROIT, MI	ног	Twy F and Rwy 03L/21R.
WILLOW RUN (YIP)	HOT <sup>1</sup> HOT <sup>2</sup>	Complex rwys/twy int.
JACKSON, MI	HOI-	Twy E1 to Rwy 27 or Rwy 23L wrong rwy departure risk.
JACKSON COUNTY-		
REYNOLDS FIELD (JXN)	HOT <sup>1</sup> HOT <sup>2</sup>	Confusing signage. No signage.
	1101	ino signage.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	description*
CINCINNATI, OH CINCINNATI MUNI		
AIRPORT-LUNKEN FIELD (LUK)	HOT <sup>1</sup>	Twy C and Rwy 03L apch area.
AIRFORT-LOINNEIN FIELD (LON)	HOT <sup>2</sup>	Twy A and Rwy 21R.
	HOT <sup>3</sup>	
	HOT	Departing acft on Rwy 21L can expect to hold short of Rwy 25 on Twy A.
	HOT⁴	Terminal ramp and Rwy 07, need ATC authorization to depart terminal ramp area.
EVANSVILLE, IN		
EVANSVILLE RGNL (EVV)	HOT 1	Pilots taxiing to Rwy 09 enter the rwy mid-field.
	HOT <sup>2</sup>	Rwy 27 and Twy A.
	HOT <sup>3</sup> HOT <sup>4</sup>	Rwy 18/36 in close proximity to General Aviation Ramp. Rwy 18/36 in close proximity to General Aviation Ramp.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION*
alton/st. louis, il	1	
ST. LOUIS RGNL (ALN)	HOT <sup>1</sup> HOT <sup>2</sup>	Twy C and Rwy 11, rwy in close proximity of ramp. Twy A and Rwy 17/35, rwy in close proximity of ramp.
CHICAGO, IL		
CHICAGO-O'HARE INTL (ORD)	HOT 1	Twy R between Rwy 09R/27L and Rwy 04L/22R.
	HOT <sup>2</sup>	Rwy 27L and Rwy 04L/22R.
	HOT <sup>3</sup>	Twy B to Twy H int close proximity to Rwy 09R/27L.
	HOT ⁴	Rwy 09R/27L and Twy A1.
	HOT <sup>5</sup>	Int of Twy U5 and Twy U in close proximity to
	HOT <sup>6</sup>	Rwy 09R/27L. Twy U and Twy H close proximity to Rwy 09R/27L.
	HOT <sup>7</sup>	Twy T10 and Twy M.
	HOT <sup>8</sup>	Twy S5 and Rwy O4R.
	HOT <sup>9</sup>	Int of Twy E, Twy G and Twy Z close proximity
		of rwys.
	HOT <sup>10</sup>	Landing Rwy 27R first available turn off is Twy C1 6500' from Rwy 27R threshold.
	HOT <sup>11</sup>	Rwy 14R and Rwy 10/28. Rwy 14R now ends north of active Rwy 10/28. Rwy 10/28 arrivals - There is no exit from Rwy 10/28 onto Rwy 14R.
CHICAGO, IL	4	
MIDWAY INTL (MDW)	HOT	Displaced thr Rwy 04L. Twy W turn onto Rwy 04L.
	HOT <sup>2</sup>	Int of Rwy O4L and Twy F.
	HOT <sup>3</sup>	Rwy 31L hold short line on Twy K.
	HOT <sup>4</sup> HOT <sup>5</sup>	Rwy 31R hold short line set back on Twy Y terminal side.
	нот	Int of Rwy 04R and Twy F.
CHICAGO/PROSPECT HEIGHTS/ WHEELING, IL		
CHICAGO EXECUTIVE (PWK)	HOT1	Complex int in close proximity of rwys.
CHICAGO EXECUTIVE (I VIII)	HOT <sup>2</sup>	Twy int in close proximity of Rwy 06.
	HOT <sup>3</sup>	Rwy 06 hold short line set back on Twy T.
	HOT⁴	Rwy 06 hold short line set back and close to Hangar 4 ramp.
JANESVILLE, WI		,
southern wisconsin rgnl (jvl)	HOT <sup>1</sup>	Rwy 32 and Rwy 36 approach ends are closely aligned and may be confused when lining up for departure.
LA CROSSE, WI		
LA CROSSE MUNI (LSE)	HOT <sup>1</sup>	Rwy 36 hold position set back on Twy F.

(SEE CONTINUATION PAGE FOR MORE LISTINGS)

CITY/AIRPORT

# HOT SPOTS

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**DESCRIPTION\*** 

HOT SPOT

CITT/ AIRI ORI	1101 31 01	DESCRIPTION
DULUTH, MN DULUTH INTL (DLH)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 27 apch area. Apch end of Rwy 27 located at Twy A5. Rwy 21 via Twy A and Twy C complex int.
GRAND FORKS, ND GRAND FORKS INTL (GFK)	HOT <sup>1</sup> HOT <sup>2</sup>	Rwy 09L and Twy A int. Rwy 17R and Twy B int.
MINNEAPOLIS, MN MINNEAPOLIS-ST PAUL INTL/ WOLD-CHAMBERLAIN (MSP)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Complex int of Twy A, Twy B, Twy C, Twy D, and Twy H in near proximity to Rwy 12R/30L and Rwy 04/22. Complex twy/rwy geometry. Complex int of Twy C, Twy D, Twy P, and Twy Q in near proximity to Rwy 12L/30R and Rwy 04/22. Complex geometry at Rwy 04 apch end.
SIOUX FALLS, SD JOE FOSS FIELD (FSD)	HOT <sup>1</sup>	Complex twy int in close proximity of rwys.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	description*
DODGE CITY, KS DODGE CITY RGNL (DDC)	HOT <sup>1</sup>	Ramp is in close proximity to rwys.
GARDEN CITY, KS GARDEN CITY RGNL (GCK)	HOT <sup>1</sup> HOT <sup>2</sup>	Back taxi required for full length Rwy 12. Rwy 17/35 in close proximity to ramp non-movement area at Twy C. Twy A leads to int of Rwy 30.
GRAND ISLAND, NE CENTRAL NEBRASKA RGNL (GRI)	HOT 1 HOT 2	Twy B crosses Rwy 17. Twy C crosses Rwy 17 at the ramp.
HUTCHINSON, KS HUTCHINSON MUNI (HUT)	HOT 1 HOT 2	Complex twy/rwy crossings. Close proximity rwy boundry markings.
LIBERAL, KS LIBERAL MID-AMERICA RGNL (LBL)	HOT 1 HOT 2	Multiple rwys and twys intersect in small area. Rwy 17/35 in close proximity to ramp non-movement area at Twy C.
LINCOLN, NE LINCOLN (LNK)	HOT 1 HOT	Complex int of rwys and twys. Apch holding position on twy near run up area.
MANHATTAN, KS MANHATTAN RGNL (MHK)	HOT 1 HOT 2	Terminal ramp at Twy D intersects with Rwy 3/21. Twy A intersects with Rwy 13/31.
OLATHE, KS JOHNSON COUNTY EXECUTIVE (OJC)	HOT 1 HOT 2	Twy crosses rwy. Unusual holding position.
OLATHE, KS NEW CENTURY AIRCENTER (IXD)	HOT 2 HOT 3 HOT 3	Complex twy/rwy int. Military ramp near twy. Complex twy/rwy ints in area of limited tower visibility.
OMAHA, NE EPPLEY AIRFIELD (OMA)	HOT 1 HOT 3 HOT	Complex twy int. Runway safety area in close proximity to ramp. Runway safety area in close proximity to ramp.

(SEE CONTINUATION PAGE FOR MORE LISTINGS)

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CITY/AIRPORT	HOT SPOT	description *		
BRANSON, MO BRANSON (BBG)	HOT <sup>1</sup> HOT <sup>2</sup>	Ramp area exits on to rwy. Twy turn around at end of rwy. Frequent back taxi operations.		
CEDAR RAPIDS, IA THE EASTERN IOWA (CID)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Intersection of Rwy 13/31 and Rwy 08/26. Rwy 09 under construction, not available. Rwy 27 under construction, not available.		
COLUMBIA, MO COLUMBIA RGNL (COU)	HOT 1 HOT 2 HOT 3	Confusing twy int. Unusual rwy holding position. Unusual rwy/rwy holding position.		
DES MOINES, IA DES MOINES INTL (DSM)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup> HOT <sup>4</sup>	From Twy B, turn on Twy D to access all rwys. Center twy complex and intersecting rwys, use extreme caution. The apch end of Rwy 05 at Twy P has limited visibility from the twr. ATCT restricted visibility at Iowa Air National Guard complex.		
DUBUQUE, IA Dubuque RGNL (DBQ)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Apch ends of rwys in close proximity. Rwy 13/31 in close proximity to ramp non-movement area at Twy D. Rwy 13/31 in close proximity to ramp non-movement area at Twy C.		
FORT DODGE, IA FORT DODGE RGNL (FOD)	HOT1	Int on twy just prior to rwys.		
FORT LEONARD WOOD, MO WAYNESVILLE- ST. ROBERT RGNL FORNEY FLD (TBN)	HOT <sup>1</sup>	Single twy access to rwy. Frequent back-taxi ops.		
JEFFERSON CITY, MO JEFFERSON CITY MEMORIAL (JEF)	HOT <sup>1</sup> HOT <sup>2</sup>	Complex int. Rwy 12/30 intersects with Twy B and Rwy 09/27. Twy B at Rwy 27 holding position marking.		
Joplin, mo Joplin Rgnl (Jln)	HOT <sup>1</sup> HOT <sup>2</sup>	Complex twy/rwy int. Ramp exit in close proximity to rwy.		
KANSAS CITY, MO CHARLES B. WHEELER DOWNTOWN (MKC)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Twy G intersection with Rwy 03/21. Holding short between Rwy 01/19 and Rwy 03/21. Confusing twy int.		
(SEE CONTINUATION PAGE FOR MORE LISTINGS)				

THERE ARE NO HOT SPOTS

FOR CONNECTICUT,

MASSACHUSETTS,

MAINE, NEW HAMPSHIRE,

RHODE ISLAND OR VERMONT

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CITY/AIRPORT	HOT SPOT	DESCRIPTION*
CALDWELL, NJ ESSEX COUNTY (CDW)	HOT <sup>1</sup>	Twy N and Twy P close proximity to Rwy 28.
ROCHESTER, NY GREATER ROCHESTER INTL (ROC)	HOT <sup>1</sup> HOT <sup>2</sup>	Adjacent thresholds. Rwy intersection.

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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HOT SPOT CITY/AIRPORT

**DESCRIPTION\*** 

BALTIMORE, MD

BALTIMORE/WASHINGTON

INTL THURGOOD MARSHALL (BWI) HOT1

Uncontrolled stop bar. No crossing allowed. HOT2 Rwy 10/28 in close proximity to Twy P1

intersection.

 $HOT^3$ Twy E closed and barricaded.

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT HOT SPOT DESCRIPTION\*

HARRISBURG, PA

 $\begin{array}{ccc} \text{CAPITAL CITY (CXY)} & & \text{HOT}^1 & \text{Rwy 26 LAHSO.} \\ & & \text{HOT}^2 & \text{Rwy 8 ILS hold line.} \end{array}$ 

 $HOT^3$  Twy C at Rwy 30 and Twy B.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	description *
BILLINGS, MT		
BILLINGS LOGAN INTL (BIL)	HOT 1	Rwy 28R hold line at an unusual location at east edge of
	HOT <sup>2</sup>	run up area. Twy H crosses Rwy 07 protected area.
EUGENE, OR MAHLON SWEET FIELD (EUG)	HOT 1	No access to Rwy 34L past Twy A9.
EVERETT, WA		
SNOHOMISH COUNTY (PAINE FIELD) (PAE)	HOT 1	Hold line for Rwy 11/29 on Twy A4 and Twy A5
	HOT <sup>2</sup> HOT <sup>3</sup>	intersection are more than 500' wide. Rwy 29 threshold in close proximity to ramp areas. Twy A between Twy A8 and Twy A9 not visible from ATCT.
GREAT FALLS, MT GREAT FALLS INTL (GTF)	HOT <sup>1</sup> HOT <sup>2</sup>	No Rwy 21 access beyond A1. A3 aligned with Rwy 25, wrong rwy departure risk.
IDAHO FALLS, ID IDAHO FALLS RGNL (IDA)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 17/35 Twy C hold bars. Twy A-1 and Rwy 20 apch hold bar. Rwy 17 and Twy A hold bar.
LEWISTON, ID LEWISTON-NEZ PERCE	1101	Kily 17 dila hiy Ahola bal.
COUNTY (LWS)	HOT 1	Twy C and Twy G intersection close proximity to Rwy 12/30.
	HOT <sup>2</sup>	Twy G between Rwy 08/26 and Rwy 30 threshold. Short distance between rwys.
PORTLAND, OR PORTLAND INTL (PDX)	HOT <sup>1</sup>	Limited wing-tip clearance at taxiway convergence point.
SEATTLE, WA BOEING FIELD/		
KING COUNTY INTL (BFI)	HOT <sup>1</sup> HOT <sup>2</sup>	Twy Z restricted access area. Rwy 13R/31L and Twy A9. Wrong rwy departure risk.
SEATTLE, WA SEATTLE-TACOMA INTL (SEA)	HOT <sup>1</sup>	Aircraft exiting Rwy 34R via Twy H then Twy J; limited distance between rwys.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION*
HONOLULU, HI HONOLULU INTL (HNL)(PHNL)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup> HOT <sup>4</sup> HOT <sup>5</sup>	Rwy 08L and Twy C. Rwy 04R, Rwy 04L/22R, Rwy 08L/26R and Twy K. Rwy 08L/26R, Twy E and Twy B. Rwy 08L, Twy A, Twy V, Twy T, Twy RB, and Twy M. Area not visible from tower.
KAHULUI, HI KAHULUI (OGG)(PHOG)	HOT 1 HOT 2	Rwy 05, Twy A, Twy F, and Twy G. Rwy 02/20, Twy E and the ramp.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

# THERE ARE NO HOT SPOTS FOR ARKANSAS OR OKLAHOMA

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CITY/AIRPORT	HOT SPOT	DESCRIPTION *
DALLAS, TX ADDISON (ADS)	HOT SPOT HOT 2 HOT 3 HOT 4 HOT 5 HOT 6 HOT 7 HOT 8 HOT 9	Twy K and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy J and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy H and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy G and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy F and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy E and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy D and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy C and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy C and Rwy 15/33. Holding Position Markings have been moved back to the edge of Twy A. Twy A and Rwy End 33. Holding Position Markings have been moved back to the edge of Twy A.
		parallel twy.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION*
MIDLAND, TX MIDLAND INTL (MAF)	HOT <sup>1</sup>	Twy B and Twy P merge.
	HOT <sup>2</sup>	Area not visible from tower.
	HOT <sup>3</sup>	Area not visible from tower.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

# THERE ARE NO HOT SPOTS FOR LOUISIANA OR MISSISSIPPI

# THERE ARE NO HOT SPOTS FOR SOUTHEAST TEXAS

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CITY/AIRPORT	HOT SPOT	description *
Knoxville, tn MC Ghee tyson (tys)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup> HOT <sup>4</sup>	Holding position marking for full length of Rwy 23L just beyond Twy A8 on Twy A. Ramp exit Twy R5 short distance from Twy A. Ramp exit Twy R4 short distance from Twy A. Acft taxiing on Twy B4 southeast bound sometimes fail to hold short of Rwy 23L.
LOUISVILLE, KY BOWMAN FIELD (LOU)	HOT 1	Twys int in close proximity to the crossing rwy.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

CITY/AIRPORT

#### HOT SPOTS

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CHARLOTTE, NC CHARLOTTE/DOUGLAS INTL (CLT)	HOT <sup>1</sup>	Confusing int due to convergence of Twy R, Twy A, Twy C and Twy C9, along with grass island. Pilots exiting Rwy 18C/36C on Twy S for either Twy E or Twy F mistakenly turn left on Twy E5 and re-enter the rwy.

**DESCRIPTION\*** 

RALEIGH/DURHAM, NC
RALEIGH-DURHAM INTL (RDU)
HOT
Int of Rwy 05R/23L and Twy C.

HOT SPOT

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION *
DAYTONA BEACH, FL DAYTONA BEACH INTL, (DAB)	HOT <sup>1</sup>	Int of Twy W and Twy S.
HOLLYWOOD, FL NORTH PERRY (HWO)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Southbound on Twy D for Rwy 27R departures. The hold line for Rwy 36L is also the hold line for Rwy 09R. Aircraft taxiing on Twy L westbound to depart on Rwy 18R/36L.
MIAMI, FL MIAMI INTL (MIA)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Multiple int closely spaced. Confusing geometry. Two rwy ends in close proximity.
STUART, FL WITHAM FIELD (SUA)	HOT <sup>1</sup> HOT <sup>2</sup>	Intersecting rwys, wrong rwy departure risk. Rwy 12 and Twy A1.

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	description *
ATLANTA, GA HARTSFIELD-JACKSON ATLANTA INTL (ATL)	НОТ <sup>1</sup> НОТ <sup>2</sup> НОТ <sup>3</sup> НОТ <sup>4</sup>	Twy C and Twy D at Rwy 8L/26R. Twy C and Twy D at Rwy 8R/26L. Twy H at Rwy 8R/26L. Twy D at Rwy 9L/27R.
AUGUSTA, GA AUGUSTA RGNL AT BUSH FLD (AGS)	HOT <sup>1</sup>	Intersection of Twy E and Rwy 17/35.
MONTGOMERY, AL MONTGOMERY RGNL (DANELLY FLD) (MGM)	HOT <sup>1</sup>	Intersection of Twy A3 and the terminal ramp. Potential confusion of Twy A3 as the taxi route to Rwy 10/28.
	HOT <sup>2</sup>	Intersection of Twy A5 and the ANG ramp. Potential confusion of the ANG ramp with the terminal ramp when exiting Rwy 10/28 at Twy A5.

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	hot spot	description*
ASPEN, CO ASPEN-PITKIN COUNTY/SARDY FIELD (ASE)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Twy A2. Short taxi distance from ramp to rwy. Twy A and west edge of ramp. Twy A4. Short taxi distance from ramp to rwy.
DENVER, CO CENTENNIAL (APA)	HOT <sup>1</sup> HOT <sup>2</sup>	Intersection Twy A-1. Hold line across run-up area. Twy A, Twy A-8, Twy A-9 and Twy C-1 congested intersections.
	HOT <sup>3</sup>	Twy C-1 and Twy D-1 close proximity to Rwy 10.
denver, co rocky mountain metropolitan (bJC)	HOT <sup>1</sup>	Frequent helicopter operations.
EAGLE, CO EAGLE COUNTY RGNL (EGE)	HOT <sup>1</sup>	High density parking area.

<sup>\*</sup>See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION*
CONCORD, CA BUCHANAN FIELD (CCR)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 01L/19R, Twy E and Twy J. Rwy 32L and run-up area, Twy J. Complex int at Rwy 01R/19L, Twy J, Twy A, Twy C, and Twy K. Rwy 32L apch, Twy A.
HAYWARD, CA HAYWARD EXECUTIVE (HWD)	HOT 1 HOT 2 HOT 3	Rwy 10L/28R, Twy E and Twy A. Area not visible from ATCT. Area not visible from ATCT.
MERCED, CA CASTLE (MER)	HOT <sup>1</sup> HOT <sup>2</sup>	Twy A, Twy A1, Twy B, and Twy G complex int. Twy A and southeast ramp, traffic congestion.
NAPA, CA NAPA COUNTY (APC)	HOT 1 HOT 2 HOT 3	Twy A, Twy C, Twy E and the ramp. Rwy 24, Twy A. Rwy 24 and Rwy 36L.
OAKLAND, CA METROPOLITAN OAKLAND INTL (OAK)	$\begin{array}{c} \operatorname{HOT}^1_2 \\ \operatorname{HOT}^2 \\ \operatorname{HOT}^3 \end{array}$	Rwy 27R, Twy A and Twy B. Rwy 09L/27R, Twy H, Twy G, Twy C and Twy D. Rwy 09L and Rwy 33, Twy J, Twy P, and Twy C, complex int.
SACRAMENTO, CA SACRAMENTO INTL (SMF)	HOT 1	Rwy 16R/34L and Twy A10
SALINAS, CA SALINAS MUNI (SNS)	HOT <sup>1</sup>	Rwy 31, Twy A and Twy E. Rwy 26, Twy A and Twy C.
SAN FRANCISCO, CA SAN FRANCISCO INTL (SFO)	HOT 2 HOT 3 HOT 3	Twy B, Twy J, and Twy F. Rwy 01L/19R, Twy C and Twy E. Rwy 28R and Twy T.
SAN JOSE, CA NORMAN Y. MINETA SAN JOSE INTL (SJC)	HOT <sup>1</sup>	Rwy 29 and Rwy 30L. Rwy 29 run-up area.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION*
HAWTHORNE, CA JACK NORTHROP FIELD/ HAWTHORNE MUNI (HHR)	HOT <sup>1</sup>	Rwy 25 run-up area.
LONG BEACH, CA LONG BEACH (DAUGHERTY FLD) (LGB)	HOT 1 HOT 2 HOT 3 HOT 4 HOT 5 HOT 6 HOT 7	Rwy 30 and Rwy 7L/25R, Twy A and Twy D. Rwy 12/30 and Rwy 7L/25R, Twy B and Twy K. Rwy 7R/25L, Twy B. Rwy 7R/25L and Rwy 12/30, Twy J and Twy D. Rwy 16R/34L, southwest ramp, Twy F and Twy B. Rwy 34R and Rwy 7R/25L. Rwy 12/30 cross every other rwy.
PALM SPRINGS, CA PALM SPRINGS INTL (PSP)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 13R/31L and Rwy 13L/31R, Twy C. Rwy 13R and Rwy 31R, Twy B and Twy C. Rwy 31R, Twy B.
SANTA ANA, CA JOHN WAYNE ARPT-ORANGE COUNTY (SNA)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 19L and Rwy 19R, Twy L and Twy K. Rwy 19L and Rwy 19R, Twy H. Twy A,Twy H, and Twy C.
SANTA BARBARA, CA SANTA BARBARA MUNI (SBA)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 7/25, Twy C. Rwy 15L and Rwy 15R, Twy C, wide pavement. Rwy 15L/33R, Rwy 15R/33L, Rwy 7/25. Rwy 15L/33R and Rwy 15R/33L utilized for taxi. Rwy 25, Twy H and Twy J.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION *
LAS VEGAS, NV McCARRAN INTL (LAS)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup> HOT <sup>4</sup> HOT <sup>5</sup>	Rwy 01R/19L, Twy S and the ramp. Rwy 01R/19L and Rwy 01L/19R, Twy U. Rwy 01R/19L and Rwy 01L/19R, Twy Y. Rwy 07L and Rwy 01L, co-located rwy holding position markings. Twy E.
LAS VEGAS, NV NORTH LAS VEGAS (VGT)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup> HOT <sup>4</sup>	Rwy 07, Twy G and Twy F. Rwy 12R, Twy G. Rwy 12R, Twy A and Twy B. Rwy 12L, Twy A.
MESA, AZ FALCON FIELD (FFZ)	HOT <sup>1</sup>	Rwy 04R/22L, Twy B and Twy D.
PHOENIX, AZ PHOENIX-MESA GATEWAY (IWA)	HOT <sup>1</sup>	Twy V, Twy B, and Twy K complex intersection.
PHOENIX, AZ PHOENIX SKY HARBOR INTL (PHX)	HOT <sup>1</sup> HOT <sup>2</sup>	Pilots sometimes mistake Twy F for Rwy 07L or Rwy 07R. Pilots sometimes cross Rwy 07L/25R at Twy F8, Twy F9, or Twy F10, without authorization.
PROVO, UT PROVO MUNI (PVU)	HOT1	Twy A and Twy A3 close proximity to ramp and rwys.
RENO, NV RENO/TAHOE INTL (RNO)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Rwy 07/25, Twy A and Twy B. Twy C and the ramp. Rwy 16L, Twy C and Twy D.
SALT LAKE CITY, UT SALT LAKE CITY INTL (SLC)	HOT <sup>1</sup> HOT <sup>2</sup>	Hold line on approach end of Rwy 32 protects Rwy 35. Confusing intersection. Twy K2 ramp in close proximity to Rwy 17/35.
TUCSON, AZ RYAN FIELD (RYN)	HOT <sup>1</sup>	Rwy 33 and Rwy 06R, Twy B.
TUCSON, AZ TUCSON INTL (TUS)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Twy A, Twy D and Twy A3, complex intersection. Rwy 11L and Rwy 11R approach areas. Rwy 29R and Rwy 29L

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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CITY/AIRPORT	HOT SPOT	DESCRIPTION *
MILWAUKEE, WI	,	
GENERAL MITCHELL INTL (MKE)	HOT <sup>1</sup> HOT <sup>2</sup>	Twy E and Twy V at Rwy 19R and Rwy 25R. Twy M and Rwy 01L/19R.
MOLINE, IL		,,
QUAD CITY INTL (MLI)	HOT <sup>1</sup> HOT <sup>2</sup>	Twys in close proximity to Rwy 23. Wrong rwy departure risk.
	HOT <sup>3</sup> HOT <sup>4</sup>	Holding position for Rwy 31 is in unusual location. Confusing twy int.
SPRINGFIELD, IL	HOT⁵	Hold lines for Twy K appear abruptly.
ABRAHAM LINCOLN CAPITAL (SPI)	HOT 1	Complex rwy/rwy int.

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

# (CONTINUED)

CITY/AIRPORT	HOT SPOT	description *
SALINA, KS SALAINA MUNI (SLN)	HOT <sup>1</sup> HOT <sup>2</sup>	Twy E int departures Rwy 17/35. Twy B intersects Rwy 12/30 and Rwy 17/35. Close proximity rwy boundry hold markings.
TOPEKA, KS FORBES FIELD (FOE)	HOT <sup>1</sup> HOT <sup>2</sup>	Twy A turns southwest to access the apch end of Rwy 03. Twy A turns south to apch end Rwy 03. Not visible from tower.
TOPEKA, KS PHILIP BILLARD MUNI (TOP)	HOT	Ramp area and twy int in close proximity to rwys.
WICHITA, KS WICHITA MID-CONTINENT (ICT)	HOT 1 HOT 2 HOT 3	Confusing ramp exit/entrance. Twy/rwy crossing. Confusing twy/rwy int.

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

# (CONTINUED)

CITY/AIRPORT	HOT SPOT	DESCRIPTION *
KANSAS CITY, MO	_	
Kansas City Intl (MCI)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup> HOT <sup>4</sup>	Busy vehicle service road crosses Twy G east of Twy B. Twy E and Twy F int with Rwy 09/27. Twy C and Twy D int with Rwy 01R/19L. Twy B-2 crosses service road.
KIRKSVILLE, MO KIRKSVILLE RGNL (IRK)	HOT <sup>1</sup>	Turf rwy taxi route via Rwy 18/36.
MASON CITY, IA MASON CITY MUNI (MCW)	HOT <sup>1</sup>	Twy leads to multiple rwys.
ST JOSEPH, MO		
ROSECRÁNS MEMORIAL (STJ)	HOT <sup>1</sup> HOT <sup>2</sup>	Ramp in close proximity to rwy. Closely located rwys.
ST LOUIS, MO	HOT <sup>3</sup>	Back taxi required for full length Rwy 13.
LAMBERT-ST LOUIS INTL (STL)	HOT <sup>1</sup>	Twy D at int with Twy L in close proximity to Rwy 12R/30L.
	HOT <sup>2</sup>	Approach end of Rwy 29 and Rwy 6 are in close proximity. Use Twy T to Rwy 29 and Twy A to Rwy 06.
	HOT <sup>3</sup>	Approach end access to Rwy 12L, from FBO and cargo ramp, requires left turn on to Twy S.
ST LOUIS, MO		•
ST LOUIS/SPIRIT OF ST LOUIS (SU	6) HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup>	Complex twy int. Blind spots on movement area. Blind spot on movement area.
SIOUX CITY, IA	1101	sima spor on more more area.
SIOUX GATEWAY/ COLONEL BUD DAY FIELD (SUX)	HOT <sup>1</sup>	Twy B intersects with Rwy 31 and Rwy 35 at the apch end of Rwy 35.
	HOT <sup>2</sup>	Twy A and Twy G intersect inside of the Rwy 13/31 Rwy Safety Area.
SPRINGFIELD, MO SPRINGFIELD-BRANSON		, ,
NATIONAL (SGF)	HOT 1	Twys in close proximity to rwys at unusual angles.
	HOT <sup>2</sup> HOT <sup>3</sup>	Ramp exit crosses rwy. Twr blind spot on movement area.
WATERLOO, IA		
WATERLOO RGNL (ALO)	HOT <sup>1</sup> HOT <sup>2</sup> HOT <sup>3</sup> HOT <sup>4</sup>	Twy int near rwys. Twy leads to multiple rwys. Twy crosses rwy immediately after leaving ramp. Twy crosses to ANG Hangar and rwy.
	пОТ	Twy Crosses to AINO Hungur una Twy.

<sup>\*</sup> See appropriate A/FD, Alaska or Pacific Supplement HOT SPOT table for additional information.

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# INSTRUMENT TAKEOFF OR APPROACH PROCEDURE CHARTS RATE OF CLIMB/DESCENT TABLE

(ft. per min)

A rate of climb/descent table is provided for use in planning and executing climbs or descents under known or approximate ground speed conditions. It will be especially useful for approaches when the localizer only is used for course guidance. A best speed, power, altitude combination can be programmed which will result in a stable glide rate and altitude favorable for executing a landing if minimums exist upon breakout. Care should always be exercised so that minimum descent altitude and missed approach point are not exceeded.

	apı	approach point are not exceeded.														
D	ES AN	MB/ CENT IGLE grees	ft/NM	GROUND SPEED (knots)												
and tenths)		ind		60	90	120	150	180	210	240	270	300	330	360		
		2.0	210	210	320	425	530	635	743	850	955	1060	1165	1275		
	:	2.5	265	265	400	530	665	795	930	1060	1195	1325	1460	1590		
V E R T I	V E R T	2.7	287	287	430	574	71 <i>7</i>	860	1003	1147	1290	1433	1576	1720		
		2.8	297	297	446	595	743	892	1041	1189	1338	1486	1635	1 <i>7</i> 83		
	Ċ	2.9	308	308	462	616	770	924	1078	1232	1386	1539	1693	1847		
		3.0	318	318	478	637	797	956	1115	1274	1433	1593	1752	1911		
4	P A T H	3.1	329	329	494	659	823	988	1152	1317	1481	1646	1810	1975		
		3.2	340	340	510	680	850	1020	1189	1359	1529	1699	1869	2039		
	4Z()_H	3.3	350	350	526	701	876	1052	1227	1402	1 <i>577</i>	1752	1927	2103		
	Ē	3.4	361	361	542	722	903	1083	1264	1444	1625	1805	1986	2166		
	3.5		370	370	555	745	930	1115	1300	1485	1670	1860	2045	2230		
	4.0		425	425	640	850	1065	1275	1490	1700	1915	2125	2340	2550		
		4.5	480	480	715	955	1195	1435	1675	1915	2150	2390	2630	2870		
	5.0		530	530	795	1065	1330	1595	1860	2125	2390	2660	2925	3190		
		5.5	585	585	880	11 <i>7</i> 0	1465	1755	2050	2340	2635	2925	3220	3510		
	(	5.0	640	640	960	1275	1595	1915	2235	2555	2875	3195	3510	3830		
	(	5.5	690	690	1040	1385	1730	2075	2425	2770	3115	3460	3805	4155		
	7	7.0	745	745	1120	1490	1865	2240	2610	2985	3355	3730	4105	4475		
	7	7.5	800	800	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800		
	8	3.0	855	855	1280	1710	2135	2560	2990	3415	3845	4270	4695	5125		
	8.5		910	910	1360	1815	2270	2725	3180	3630	4085	4540	4995	5450		
	9.0		960	960	1445	1925	2405	2885	3370	3850	4330	4810	5295	5775		
	9.5		9.5		1015	1015	1525	2035	2540	3050	3560	4065	4575	5085	5590	6100
	10.0		1070	1070	1605	2145	2680	3215	3750	4285	4820	5355	5890	6430		

CLIMB/DESCENT TABLE 10042